

# Biodiesel Transesterification

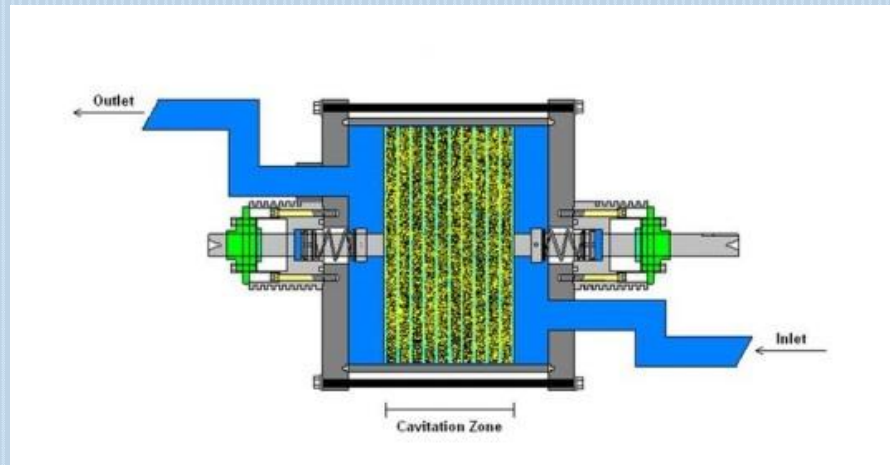
**Hydro Dynamics, Inc.**  
Harnessing the Power of Cavitation



# Advanced Cavitation Technology

**Hydro Dynamics, Inc. (HDI) has developed a patented technology providing breakthrough benefits for industrial processing of fluids. HDI's product, the ShockWave Power™ Reactor (SPR) utilizes "controlled cavitation" to solve critical problems for customers in numerous industries. The SPR represents a paradigm shift for fluid processing and is truly a next generation industrial technology that allows customers to realize significant cost savings through improved efficiencies, lower capital expenditures, decreased maintenance costs and reduced environmental impact. The SPR has been installed all over the world and is used by several Fortune 500 companies. HDI, founded in 1991, is headquartered in Rome, Georgia, USA.**

# Technology



As a liquid passes through the SPR it is subjected to “controlled cavitation”. The heart of the device is a specially designed rotor that spins. The spinning action generates hydrodynamic cavitation in the rotor cavities away from the metal surfaces. The cavitation is controlled and therefore there is no damage. As microscopic cavitation bubbles are produced and collapse, shockwaves are given off into the liquid which can heat and/or mix.

## The technology inside

Our plants are designed around the patented ShockWave Power Reactor (SPR) by Hydro Dynamics, Inc. for the transesterification reaction. In use for commercial biodiesel production since 2003 with over 500 million gallons of capacity already sold making it a world leader in the industry.



For more information please visit  
<http://www.hydrodynamics.com>